

CLAIMS

I claim:

1. A first RFID reader for use in a security network, containing:
 - a processor,
 - 5 - memory for storing program code and configuration data,
 - a control function contained within the program code, and
 - at least a first antenna for use in wireless communications.
2. The RFID reader of claim 1, wherein the security network can be used in a building with at least one opening to be monitored for intrusion.
- 10 3. The RFID reader of claim 1, wherein the security network can be used in a building to be monitored for smoke or fire.
4. The RFID reader of claim 1, wherein the security network also contains at least a first RFID transponder, and wherein the first RFID reader can receive wireless communications from at least the said first RFID transponder.
- 15 5. The RFID reader of claim 1, wherein the security network also contains a second RFID reader, and wherein the said first RFID reader can receive wireless communications from the said second RFID reader.
6. The RFID reader of claim 1, wherein the security network also contains at least a first RFID transponder and a second RFID reader, and wherein the said first RFID reader can receive a wireless communications from the said first RFID transponder to the said
20 second RFID reader.
7. The RFID reader of claim 1, wherein the said first RFID reader further contains a second antenna for use in wireless communications.
8. The RFID reader of claim 7, wherein the said first RFID reader uses only one of the said
25 first antenna or the said second antenna in each wireless communications.
9. The RFID reader of claim 8, wherein the configuration data contains parameters that predetermine which of the said first antenna or the said second antenna to use in each wireless communications.

10. The RFID reader of claim 1, wherein the said first RFID reader further contains a battery backup.
11. The RFID reader of claim 1, wherein the said first RFID reader supports more than one modulation technique.
- 5 12. The RFID reader of claim 11, wherein at least one modulation technique is continuous wave.
13. The RFID reader of claim 11, wherein at least one modulation technique is Gaussian Frequency Shift Keying.
14. The RFID reader of claim 1, wherein the said first RFID reader supports multiple
10 transmit power levels.
15. The RFID reader of claim 1, wherein the said first RFID reader can vary its rate of transmitting RF energy.
16. The RFID reader of claim 1, wherein the said first RFID reader further contains algorithms for using microwave Doppler analysis to detect motion.
- 15 17. The RFID reader of claim 16, wherein the said first RFID reader applies the said algorithms for using microwave Doppler analysis to detect motion to the response wireless communications from a first RFID transponder.
18. The RFID reader of claim 1, wherein the said first RFID reader further contains an acoustic transducer.
- 20 19. The RFID reader of claim 18, wherein the said first RFID reader further contains algorithms to process audio waves received by the acoustic transducer, and wherein the algorithms are designed to detect glass breakage.
20. The RFID reader of claim 18, wherein the said first RFID reader further contains algorithms to process audio waves received by the acoustic transducer, and wherein the
25 algorithms are designed to perform voice recognition.
21. The RFID reader of claim 19, wherein the control function contained within the said first RFID reader accepts commands received via voice recognition.

22. The RFID reader of claim 18, wherein the said first RFID reader further contains algorithms to digitize the audio waves received by the acoustic transducer, and retransmit the digitized audio waves via wireless communications.
23. The RFID reader of claim 1, wherein the said first RFID reader further contains a sensor that can monitor an environmental parameter in at least one portion of the building.
24. The RFID reader of claim 23, wherein the said environmental parameter is the presence of smoke.
25. The RFID reader of claim 23, wherein the said environmental parameter is temperature.
26. The RFID reader of claim 23, wherein the said environmental parameter is the presence of water.
27. The RFID reader of claim 1, wherein the said first RFID reader further contains a camera.
28. The RFID reader of claim 27, wherein the said first RFID reader further contains algorithms to digitize pictures recorded by the camera, and transmit the digitized pictures via wireless communications.
29. The RFID reader of claim 1, wherein at least one operation of the said first RFID reader is under the control of a master controller contained within the security network.
30. The RFID reader of claim 29, wherein the said master controller is contained within a device in the security network other than the said first RFID reader.
31. The RFID reader of claim 29, wherein the said master controller is contained with the said first RFID reader.
32. The RFID reader of claim 31, wherein the said master controller can send a command controlling at least one operation of another device contained within the security network.
33. The RFID reader of claim 1, wherein the configuration data contained with the said first RFID reader can be changed under the control of a master controller or control function contained within the security network.
34. The RFID reader of claim 1, wherein the program code contained with the said first RFID reader can be updated under the control of a master controller or control function contained within the security network.

35. The RFID reader of claim 1, wherein the said first RFID reader further contains an RFID transponder within the physical packaging of the said first RFID reader.
36. The RFID reader of claim 1, wherein the said first RFID reader further contains an interface to a prior art security system.
- 5 37. The RFID reader of claim 36, wherein the said first RFID reader can receive power via the interface to the said prior art security system.
38. The RFID reader of claim 36, wherein the said first RFID reader can receive commands via the interface to the said prior art security system.
39. The RFID reader of claim 1, wherein the said first RFID reader is mechanically mounted to a plate, and wherein the plate can be mechanically mounted to an outlet.
- 10 40. The RFID reader of claim 1, wherein the said first RFID reader is integrated with an outlet, and the physical packaging of the integrated RFID reader and outlet can be installed within a standard outlet box approved for use within buildings.
41. The RFID reader of claim 1, wherein the said first RFID reader is integrated with a light switch, and the physical packaging of the integrated RFID reader and light switch can be installed within a standard outlet box approved for use within buildings.
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